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DEC. 1942—FEB. 1943

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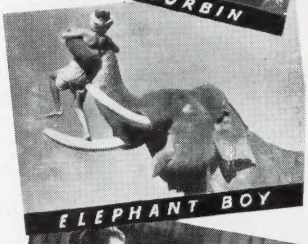

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AMATEUR CINE WORLD

Incorporating "Miniature Camera World"

WINTER
DECEMBER, 1942—FEBRUARY, 1943
VOL. I. No. 9
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THE ONLY JOURNAL SOLELY DEVOTED TO SUBSTANDARD CINEMATOGRAPHY

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GORDON S. MALTHOUSE, *Editor*

At Home And Away

AMATEUR cinematographers have long since demonstrated that their most effective contribution to the war effort, as amateurs, lies in the provision of entertainment and instruction for the Services. It seems a far cry now from those early days when there were not a few folk ready enough to sneer at the amateur who still tried to go on 'playing his little game with his little toys.'

Some enthusiasts, however, while very willing to offer their services are uncertain as to just where to do so. The following letter will crystallise the case for many; and we are glad to feel that the spirit it expresses is representative of the whole amateur film movement these days.

Two friends and I (writes our young correspondent), have access to a complete school projection equipment (16mm. sound) and should like to go "on tour" with it during Christmas week, giving entertainment shows to isolated army units in the locality. I have no doubt that such shows would be welcome, but we have not the necessary transport available.

I understand that there is an "Officer's Entertainments Board" which arranges films, transport, etc., for such shows, but I do not know where to communicate with them. Could you give me any information on the subject, or put me in touch with the appropriate army authority?

You may be interested to know that we three six-formers have been on tour for the Home Guard with instructional films during the last nine months. We have done twenty evening shows in the most varied and unsuitable buildings, many of them being given after a six-mile ride through a foot of snow on the back of a coal lorry, with nothing to hang on to but the equipment! All the same, we have surprised many people as to the quality of reproduction possible with substandard apparatus.

Our correspondent, in common with other readers who have similar problems, would do best to write to the Welfare Officer, Home Service Forces, War Office, London, W.1, who can arrange contacts with the Area Welfare Officer. The latter will not only be aware of the places where entertainment is most needed, but will also probably be able to solve, within reason, the transport puzzle.

But amateurs who, for various reasons, cannot tour round with a 'road show,' however limited and unpretentious, can yet do very good work—and possibly in a quarter where they least expect to be able to do it.

We refer to those who live in the neighbourhood of big Service concentrations, such as Army Ordnance Depots. Now such depots invariably have an efficient welfare department which arranges film shows, Ensa entertainments, musical concerts, lectures and the like; and it may therefore justifiably be supposed that entertainment such as the amateur cinematographer can provide would not be needed here.

But there are two things that the soldier esteems almost above all else when off duty: (1) a warm place where he can eat and relax of an evening, (2) a reminder, however remote, of home comforts. Now that 48-hour leaves are denied to many by reason of the withdrawal of cheap fares over fifty miles, the more eager will be the acceptance of hospitality that embraces a display of family films in homely surroundings in which such things as parades, guard duties and fatigues are forgotten.

For the soldier, as much as his comrade the factory worker, needs relaxation; he cannot be at concert pitch all the time. Again, maybe he is destined for foreign draft, and will therefore welcome spending a little of such time as remains to him in this country in surroundings and companionship reminiscent of home.

So if you find it inconvenient to go to the troops with your projector, why not invite one or two men to come to you? Why not, too, arrange with your neighbour to come along for the evening? If you will not be economising on electric current, he at least will be saving on coal, and can then with a good conscience issue an invitation for a return visit.

There are also welcome friends in our midst who are some thousands of miles from home. British films, whether library features or personal productions, will be something more than a mere novelty and transient entertainment to them, for such films must

(Continued on page 323)

A wartime production still: Sivad Screen Service, a group of keen amateurs, shooting a scene from "Celluloid Cameo," showing Handel at the harpsichord. As only his face and hands will be shown, it is enough to give him a collar and cuffs over a modern coat.

Sound VERSUS *Dialogue*

by ANDREW BUCHANAN

The series of monthly articles by Mr. Buchanan in A.C.W. on The New Order in Films, in which he examined the past and present in order to find a formula for a brighter future, aroused widespread interest among amateurs and professionals alike. Here, in response to many requests, he sets forth views, which will command attention, on the place of sound in the film of today and tomorrow.

THE film industry is naturally more concerned with profits than prophets, looking into the future being rather an unpopular sport in the fantastic kingdom of Celluloidia. Yet, without the kind of planning inspired by a mingling of prophecy, instinct, and experience, no great industry can hope to be capable of catering for a future which must be fundamentally different from the days we live in.

Technically, modern productions achieve excellence, but that is not enough, and no producer, amateur or professional, should forget that a film can reach further pinnacles of technical ingenuity, as yet undreamt of, yet fail utterly through an absence of those qualities so essential both to true filmic expression and a finer future.

The first fact confronting the prophet is that most of the individuals in, say, Britain, or France, or any other film-producing nation, are completely satisfied with their respective countries' films because they can *understand* them. Indeed, it would be extraordinary if they could not, for both the audiences and the films speak the same languages.

Few, however, of those individuals realise that the films they so enjoy are incomprehensible to most other races so that the introduction of the spoken word on to the screen has retarded the progress of film as an international medium of expression to a lamentable degree.

In silent days, when I was engaged upon the export side of the industry, I remember dealing with contracts for British films covering the whole of Europe and the East—the only alterations necessary being translations of the sub-titles into as many languages as there were markets. I remember, too, numerous advanced films which achieved distinction by being so cleverly constructed that they dispensed even with sub-titles—their plots being explained by moving images—understandable to *all* human beings: a form of narration parallel to the earliest known method of story-telling by pictures alone.

The numbers of such films were increasing when sound arrived, and, in a strange metallic voice, shouted its way on to the screen, thereby reducing a great international medium to a national one, with all the attendant limitations which go hand in hand with the policy of dividing the peoples of the earth one against the other. With the miracle of sound in our hands, we, and our English-speaking colleagues in America, became so engrossed in the production of films relying on synchronised speech to tell their stories, that we temporarily lost sight of the fact that increasing dependence upon dialogue would result in the loss of world markets.

Now, the loss of markets is a commercial tragedy. Even so, I am primarily concerned with something far more important (and there

are some things more important than commerce!)—the loss of a link of universal understanding which, until dialogue intervened, was gaining ground every year. It is true that, owing to the materialistic mentalities of many purveyors of film entertainment, the silent interpretations of English and American life which were circulating throughout the world were doing little good to us, especially in the East, for they projected unnecessarily lurid versions of Western civilization, but the very fact that this was realised, and modified, proved that the power of the screen was recognised.

Of course, commercialism was quick to seek a remedy for lost markets, but the only one it could devise was to print sub-titles over the talking images, to explain what the characters were talking about. We have tested this in French and German films released over here before the war, and although the results were, to an extent, commercially successful insofar as they enabled 'foreign' films to circulate beyond their own shores, they quite definitely failed as examples of international filmic expression.

The reason lies in the fact that, whereas the silent production was approaching perfection in this direction, sound had not been manipulated in such a way as to add strength to the silent film, and enable it to continue encircling the world, with greater dramatic force. Instead, dialogue was concentrated upon, and *moving* pictures moved less and less as they became more and more *talking* pictures.

Since the war, even more markets have been lost, of course. Logically, we can blame the war, but actually we should blame dialogue, for it had begun to narrow down the limits of film circulation long before the present crisis. The reaction to this will be colossal when peace sweeps barriers away, and to cater for such reaction films will need to be built upon an infinitely broader and more universally acceptable basis.

But is the sub-title-cum-talkie method really so inadequate? Have not the Continental films released in Britain proved popular, and have not British films similarly treated achieved success abroad? To a limited degree, but there are several reasons why the method is frustrating.

First, audience-repose vanishes, it being humanly impossible to *look* at a film, *listen* to the characters talking in a tongue one doesn't understand, and be ready, every few seconds, to read sub-titles flashing across the base of the pictures, without missing any of the action above them—and fully appreciate the production. We might be able to achieve any two of those exercises, but not three, simultaneously. Habit, of course, makes it easier to comprehend such 'foreign' films, but it is a bad habit, and filmic expression recedes further into the background.

However, before explaining my suggested alternative, I would remind you of the basic function of film, and the need always to disassociate it from the spoken word, and, to a large extent, from the written word. Its unique capability is to project actuality, and merely because studio lamps have attracted theatrical and literary folk in thousands, like moths to a candle, is no reason why we should come to believe that film is fulfilling itself by presenting synthetic drama and comedy. Nor is there anything against productions of that kind, providing they do not exclude the kind of films most suited to the medium.

We have spoken of the need of international productions, but this should not be interpreted as meaning a total elimination of national characteristics—rather the presentation of them in such a manner that they shall appeal to all peoples. American productions are good examples. Definitely American, yet they appeal to many races. It is the urgent need to extend the circulation of English-speaking films to all nations which makes it so necessary to find a substitute for direct dialogue.

Consider the immensity of this ideal—the world circulation of film understandable by all. Compare it with radio, which, apart from invisibility, is hedged in by linguistic barriers, and then imagine a film being shown simultaneously in all nations, and of the influence it can have over humanity. Let's simplify that further. Visualise a negro who has never been to Pimlico, and who never will: an Arab who has never been to Berlin or Mexico: French and German peasants who have never been to London, or New York: a little old lady in an English provincial town who has never visited the Congo, or Iceland, or even Ireland.

Film is capable of taking these people all over the world, and, providing productions are neither falsified, nor melodramatised for political reasons, they cannot be but faithful presentations of the places projected. The film travelogue is, of course, the most elementary example one can offer, but add to it the creative touch of the Documentalist, so that the camera penetrates into each locality, revealing characteristics, the kind of food eaten, the sort of money used, the temperatures endured, the churches wherein the people worship, and, above all, family life, revealing that no one nation or group of nations possesses a monopoly of human love and goodness.

Carry the point a stage further, and intro-

duce the fictional element to enable the story of several personalities to be told against an authentic background, and there the feature film emerges—blending the realism of the travelogue with pictorial drama or comedy. That is all very well, but we are still dependent upon direct dialogue, and while that is so, international circulation is but a dream.

The Armley Cine Society, formed in the second year of the war, have built an attractive theatre in the space of a few months. The surrounds of the proscenium, seen here, are carried out in tangerine, amber and blue lights being obtained via the mixing panel. The dummy curtains are in a deeper shade of tangerine, behind them are the main curtains in the same shade, then a screen curtain in light blue, with a delicate floral design in royal blue and silver. Dimming, mixing of lights, and all curtain operations are controlled direct from the projection room.

What, then, is the solution ? As I visualise it, the film of the future will dispense with direct dialogue, depend primarily upon moving images, and will introduce, sparingly, indirect dialogue, the whole to be supported by natural sound and illustrative music. Let us examine that formula.

First, silent technique will be reverted to, which means that scenarists will need to exert ingenuity in the telling of stories by pictures without the aid of dialogue. Second, natural sound will be recorded to provide backgrounds to the various locations involved in such stories, and a composer will weave all such sounds into a continuous musical accompaniment written especially for each production. That is, sound and music will become one, each temporarily superseding the other according to the requirements of pictorial action.

So far, you note, the moving images, the sounds, and the music will be creating a unity understandable to all races. Now for the human voice. Undoubtedly, speech will play a part in the narration, but, in a conversation between, say, two characters, we shall always be looking at the listener while listening to the speaker, who will be invisible while talking. Thus, we shall study the listener's facial reactions, and when he, in turn, replies, we shall be looking at the person who has ceased to talk.

The extraordinary thing about this method is that, if properly constructed, an audience will be unconscious of any major difference in presentation to present direct dialogue sequences, for such conversations (which will be reduced to a minimum, anyhow) will be as smooth and swift as normal conversation anywhere. The basic difference, of course, is that the voice of the speaker can be added in any language, there being no problems of dubbing while trying to achieve perfect lip synchronisation. Indeed, the process will be as simple as changing subtitles.

Not only will this overcome the language difficulty, but it will enable film to keep moving instead of being held up while characters carry on a direct conversation in the tradition of the stage. However, though dialogue is thus catered for, it will be found that producers will depend upon it less and less, as the power of natural sound and music becomes more evident.

That is a simplified description of what will, in effect, be a filmic revolution ; the variations of the basic principle are limitless, of course. It is sufficient, however, to repeat that the vast difference between the present dialogue film and the future sound-music-indirect speech production is the difference between national and international distribution.

The reason I am sure this kind of film will evolve is on account of the reaction that will set in when hostilities cease, for there will be a frantic clamouring for the world markets which will again become available, supported by an ever-increasing desire on the part of all peoples to crush artificial nationalism, and to discover the truth about their neighbours. This urge will be overpowering, and whether the freeing of film in the above manner will be mainly attributable to the commercial concerns which see all nations as markets within their grasp, or to the overwhelming desire of the peoples to have a common link of understanding, or to both, we may rest assured that the future is going to bring film into its own by endowing it with just those qualities which shall make it acceptable to all men.

Remember, the sun and the stars and the moon, shine over the whole earth. Wind and rain are everyone's neighbours. Music is the voice of humanity as a whole. Film is going to take its place along with these universal gifts.

It will serve as the mirror of mankind.

"DO IT YOURSELF!"
practical ideas for the handyman

A MAKE-SHIFT LAMP RESISTANCE

In each issue our contributor supplies worth-while ideas: things to make and things to do. Suggestions for gadgets are welcomed.

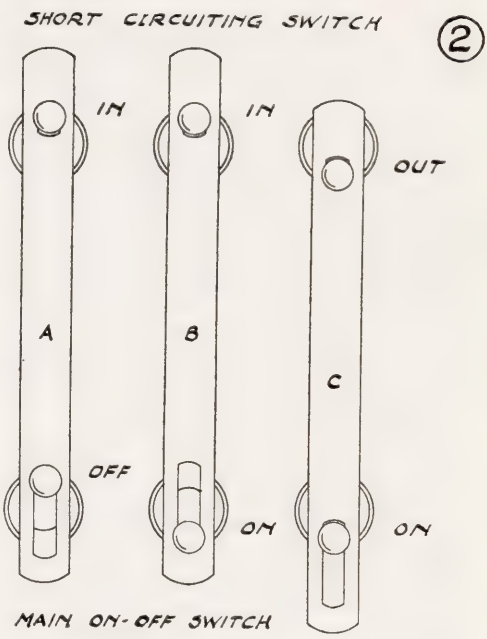
By G. A. GAULD, B.Sc.

ONCE again I am going to talk about watts, and ohms and amps because so many of the queries I receive concern lamps and resistances. During the last year or two, many family projectors have taken to the road, bringing to their owners a host of new problems, not the least of which is that of differing voltages and different types of current.

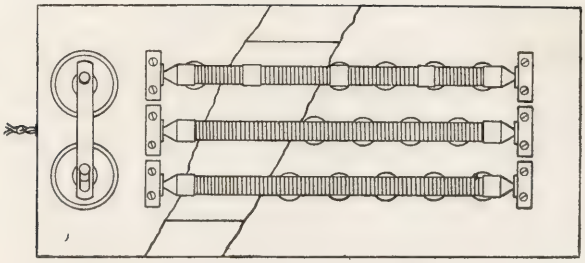
Elsewhere, I have pointed out that, although a resistance is not generally an economical proposition for alternating current, this disadvantage is largely offset by its universal application to both direct *and* alternating current over a wide range of voltages. Consequently, there is much to be said for a resistance when the projector takes the road. I gave a full description of a suitable resistance in the May issue for 1941, but it is evident that emergency conditions can and do arise, when neither time nor proper materials are available for its construction. What then, can be done by way of improvisation? Ordinary electric fire heater elements provide the answer to the problem.

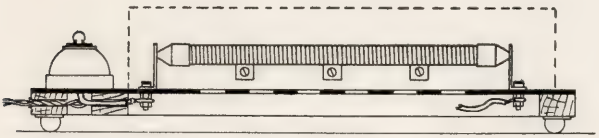
Readers may remember that the wire I recommended for the construction of the resistance was specially manufactured for the purpose and the metals of the alloy so chosen, that the wire possessed a low temperature coefficient. That is to say, there was practically no change in the value of the resistance of the wire between room and operating temperature.

Unfortunately, heater elements have other conditions to fulfil and the wire used has a relatively high temperature coefficient. The resistance at room temperature may be from 5 per cent. to 10 per cent. less than the value at red heat. This factor must be taken into account. To get the maximum efficiency from the lamp, it must operate at its full rated current when the resistance is hot. Yet, when first switched on, the resistance will be too low and the initial surge of current may be quite sufficient to "blow" the lamp. An auxiliary resistance unit is therefore essential. It is retained in the circuit for the first few minutes until the main resistance has reached its full heat. The value of the main resistance will have become stabilised and the auxiliary resistance may then be short circuited, leaving the lamp running at its correct rating.



The heater elements supplied for Ferranti electric fires are particularly suitable. The element is in the form of a round rod upon which the wire is wound in a long, single spiral. Contact may be made at any point by a simple brass clip, passed round the rod, after first removing the oxide on the wire by rubbing with a piece of fine emery cloth. End supports which act as terminals as well can readily be made out of brass sheet, cut out and bent to a right angle, a fairly large hole being drilled to take the pointed end of the element.





Those appeals to save paper that you are continually reading in the press—are you taking them to heart? Each scrap of paper salvaged is directed to some vital war need. Every time you hand over your old papers, letters and boxes you are bringing nearer the day of victory.

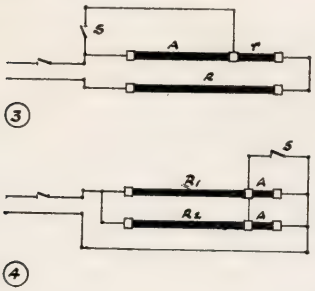
A suitable mounting for the unit is shown in Fig. 1. A wood frame is knocked up and covered with a sheet of asbestos-cement. Large holes are cut or drilled in the sheet under the heater elements and feet are provided to lift the frame clear of the surface upon which it is standing, so providing for ventilation. Sufficient room should be provided for the short circuiting switch (an ordinary "On-Off" house lighting switch) and a main switch to be connected to one of the leads. For neatness, connections are made at the back of the asbestos-cement sheet and a cover of perforated metal should be provided to protect the elements and prevent accidental contact which might lead to fire or a bad burn.

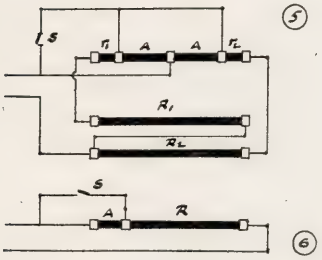
Fig. 2 shows a simple gadget making the use of the auxiliary resistance practically foolproof. The two switches are set in line so that the tumblers throw each way in the same direction. A thin piece of brass strip is drilled at one end and slotted at the other and slipped over the heads of the tumblers as shown. In position "A" both switches are "Off." That is to say, the short circuit is broken and the auxiliary resistance is "In," and it cannot (except by the use of brute force) be short circuited. Position "B" shows the main switch "On" bringing the whole resistance into circuit. Only now may the short circuiting switch be moved ("C") to the "On" position, thus throwing out the auxiliary resistance. It must again be put "In," ready for the next start up, before the main switch is returned to the "Off" position.

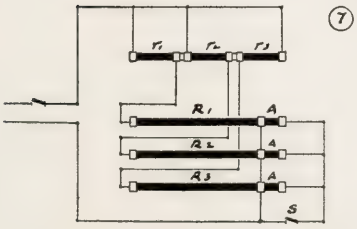
A number of examples will now be given, being, I think, the simplest way of explaining how the number and size of elements required may be determined for any particular case. It is important however, to remember that owing to the materials used, results are only approximate. Contact clips should first be set to give an excessive resistance and their final position determined under operating conditions by the aid of an ammeter. No doubt the electrician from whom the heater elements are purchased will be willing to lend his instrument for an evening for this purpose.

1. **200 watt lamp, 110 volt.**
   Current taken = 200/110 = 1.82 amps.
   Int. Res. = 110/1.82 = 60.5 ohms.
   Breakdown resistance required on 230 volt mains is :—
   (230-110) / 1.82 = 65.9 ohms.
   1000 watt heater element for 230 volt mains :—
   Normal current = 1000/230 = 4.35 amps.
   Resistance (Hot) = 230/4.35 = 52.9 ohms.
   Number of elements required in series = 65.9/52.9 or about $1\frac{1}{4}$. Arrange as Fig. 3. "R" is one full element, "r" is about one quarter the length of the second element, and the balance "A" forms the auxiliary resistance.

2. **200 watt lamp, 50 volt.**
   Current taken = 200/50 = 4 amps.
   Int. Res. = 50/4 = 12.5 ohms.
   Breakdown resistance required on 230 volt mains is :—
   (230-50) / 4 = 45 ohms.
   Number of 1000 watt, 230 volt heater elements required :—
   45/52.9 or between eight and nine tenths.
   Arrange as Fig. 6 where "R" is about 85 per cent. of the length, and the balance "A" forms the auxiliary resistance.







3. 250 watt lamp, 50 volt.

Current taken=250/50=5 amps.
Int. Res. =50/5=10 ohms.
Breakdown resistance required on 230 volt mains is :—
(230-50) / 5=36 ohms.

Now a 1000 watt, 230 volt heater element has ample resistance, but it will not carry 5 amps with safety, as its normal rating as shown above is 4.35 amps. Therefore try two 600 watt (Ferranti standard) elements *in parallel.*

Normal current for one element is 600/230 =2.61 amps.

Two in parallel will therefore take 2 x 2.61 or 5.22 amps., which will be satisfactory.

Normal resistance of one element is 230/2.61=88.2 ohms.

Resistance of two in parallel will be half this, or 44.1 ohms.

The length of element required will therefore be :—36/44.1 or about three quarters.

Arrange as Fig. 4 where " R1 " and " R2 " are each equal to approximately three quarters of the length of each element and " A-A," the balance form the auxiliary resistances, also two sections in parallel.

4. 500 watt lamp, 110 volt.

Current taken=500/110=4.54 amps.
Int. Res. =110/4.54=24.2 ohms.
Breakdown resistance required on 230 volt mains is :—
(230-110) / 4.54=26.4 ohms.

The current taken by the lamp is in excess of the 1000 watt heater element rating, so two are used in parallel. The net resistance will now be 52.9/2 or 26.4 ohms, the required value. This is cutting things rather fine however. As auxiliary resistances will also be required, a little extra resistance may be introduced without difficulty by the use of a third element as shown in the layout in Fig. 5. The main is fed in at the centre point of the third element, so avoiding the necessity of cutting it, and the values of " r1 " and " r2 " will be very small.

5. 750 watt lamp, 110 volt.

Current taken=750/110=6.82 amps.
Int. Res. =110/6.82=16.1 ohms.
Breakdown resistance required on 230 volt mains is :—
(230-110) / 6.82=17.6 ohms.

To avoid a large battery of elements reaching red heat, the load is spread over three 1000 watt, 230 volt heaters, with additional sections as shown in Fig. 7. In this case, the heater wire will have to be cut between the double clips to separate " r1," " r2 " and " r3." Final adjustment for the correct value is made on the main heater bars, leaving the balance " A-A-A " for the auxiliary.

The internal resistances of the lamps have been given because by the use of them, a useful check can be made on the whole circuit. If the mains voltage is divided by the sum of all the resistance (effective) in the circuit, the result will be the current flowing in the circuit. This should be the same as the lamp rating. For example, take case 3 :—

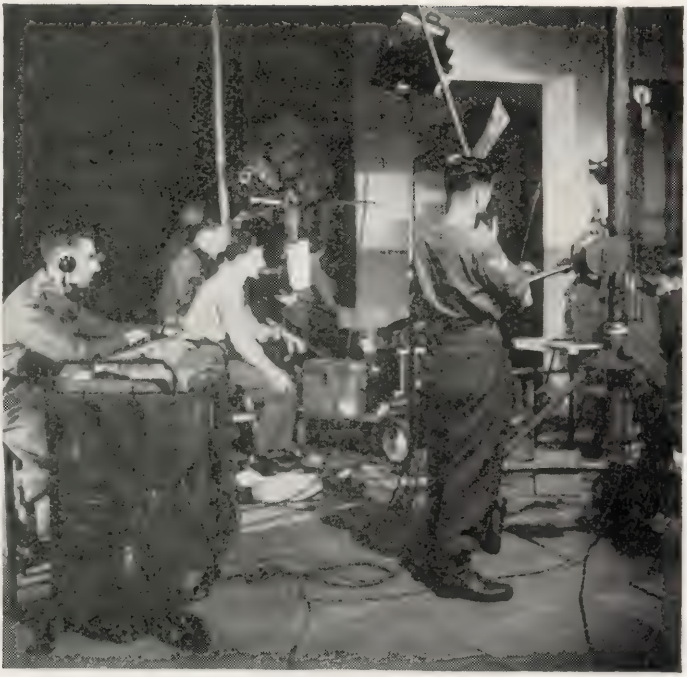
Lamp resistance ..... 10.0 ohms.
Main resistance 88.2/2 x ¾ .. 33.0 ohms.

Current in circuit is therefore 230/43= 5.3 amps. against the lamp rating of 5 amps.

Pinewood Studios were recently taken over by the Government as the headquarters of three official film units working with the Ministry of Information: the Crown Film Unit (despite its meagre budget which has earned for it the nickname, the Half-Crown Film Unit, it has turned out some excellent work), Army Film Unit, and R.A.F. Film Unit. The A.F.U. is here seen at work on "The People's Army," the production still on the left showing the shooting of a Naafi film show.

The Army Film Unit at work

Sergeants of the A.F.U. inspecting film in the cutting room. The Unit is staffed by skilled technicians within the Army. Another organisation, the Army Film and Photographic Unit, consists of cameramen and technicians who are also front-line soldiers; outstanding are their pictures of the Egyptian campaign.



The studio sound engineer (he holds the rank of captain) at the mixer panel during shooting by the A.F.U. Entry to the Army kine corps is through the ranks, and for those without professional experience the only job available is that of projectionist. Only men in the lower medical categories are, however, accepted for this work, which is more and more being taken over by members of the A.T.S. D.A.K. (Directorate of Army Kinematography) is part of the R.A.O.C.

The director, script in hand, intent on the shooting of a scene for "The People's Army." A number of short films have already been turned out, in addition to the very fine pictures of our army in action.

This Army captain (in shirt sleeves), the first A.F.U. cameraman with the B.E.F., accompanied Special Service troops on their raids on the Lofoten and Vaagso Islands, when some fine shots were made.

Romance, rose-garden, statue, Bunny and Gwen.

House Peters as the nonchalant, cigarette-smoking Raffles, with Hedda Hopper as Clarice Vidal.

Raffles

A CRITICAL COMMENTARY BY H. A. V. BULLEID

FAMOUS LIBRARY FILMS No. 16.

THE American "Picture Play" of October, 1925, remarked :—

"*Raffles* . . . House Peters is not dashing enough in this story of a crook. In fact, the whole picture is too slow."

. . . and it must indeed be admitted that the film is painfully weak, which, having in mind the famous character and the previous successes of the director, star, and scenario-writer, is at first puzzling : but the answer undoubtedly lies in the fact that a wrong angle of approach has been taken in trying to keep to the spirit of the E. W. Hornung stories whilst failing to allow for the fact that they are *told by Bunny*, whereas the film shows them from the *point of view of a third party*. Thus, both scenarist and director have erred in stressing touches such as (quoting the novel) . . .

"So it's a case of common pot-hunting," remarked Raffles, eyeing me shrewdly through the cigarette smoke. or . . .

"Capital!" cried Raffles, throwing coils of smoke between his smiles.

House Peters struggles valiantly with such gestures, but the effect is not satisfactory, affectation being portrayed rather than nonchalance. Moreover, calculated gestures occupy footage to the exclusion of action, and indeed the screen is often full of people standing about doing nothing of particular interest.

That the love theme is trite and rather ludicrous, and the ending a terrific anti-climax, are all the more remarkable when one considers that scenarist Harvey Thew was responsible for the sprightly and dashing Reginald Denny comedies (e.g., *Oh, Doctor*), and that director King Baggot also had to his credit such vigorous action-drama as *The Kentucky Derby* (1922, Reginald Denny) and *The Tornado* (1924, House Peters).

One can only assume that their abject failure to infuse any trace of dramatic action or suspense into this version of *Raffles* was due to an obsession with characterisation, and the foolish choice of two of the most un-cinematic of Raffles's adventures as the basis of their picture. King Baggot was famous also as an actor, chiefly prior to 1923. He played all types, and did particularly well in the heavy-comedy part of Fred Smith in *The Girl in the Taxi* (F.N., 1921, by Lloyd Ingraham, starring Mr. and Mrs. Carter de Haven).

Raffles moved in excellent company : released the same week were *Romola* (by Henry King, with Lillian and Dorothy Gish), *The Sea Hawk* (by Frank Lloyd, with Milton Sills, Wallace Beery), as well as a Clara Bow and a Bebe Daniels feature.

The brief treatment is as follows :—

Nonchalant Raffles, drinking, gambling Bunny, and vamping Clarice are introduced on board ship, bound for Tilbury. Raffles steals a necklace, eludes the search, and returns it—the reward to be paid to charity.

Production	.. Universal, U.S A., 1925.
Producer	.. Carl Laemmle.
Trade Review	.. May 21st, 1925. Distributed by European.
English Release	.. September 21st, 1925.
Length	.. 5 reels.
Directed by	.. King Baggot.
Scenario	.. Harvey Thew.
Photography	.. Charles Stumar.
Derivation	.. Short Stories by E W. Hornung & E. W. Presbrey.

The Players—in order of appearance.

A. J. Raffles	.. House Peters
Bunny	.. Freeman Wood
Clarice Vidal	.. Hedda Hopper
Lady Amersteth	.. Kate Lester
Gwendolyn Amersteth	Miss Du Pont
Captain Bedford	.. Frederick Esmelton
Lord Amersteth	.. Winter Hall

Sub-standard availability :—
5 reels 16mm., or 5 reels 8mm.

Bunny drags Raffles to week-end with Lord Amersteth, where they meet Clarice again, also Bedford, a criminologist who is after "the Amateur Cracksman." Bunny proposes to Lady Gwen, but is turned down. Raffles pleads for him, but Gwen thinks he is proposing, and she likes it. Lord Amersteth demonstrates his burglar alarm, which lights up the whole garden. Crawshay, a "Cockney" crook, uses the housemaid to steal Lady Amersteth's pearls, but Raffles intervenes and grabs them himself, and captures Crawshay. Bedford ridicules this capture, and wagers Raffles he will recover the pearls by eleven o'clock next evening : and they both arrange to leave for London early next morning. Clarice, seeing Gwen's reaction to Raffles, tips off Lord Amersteth that he is the Amateur Cracksman.

Raffles leaves a phoney letter for Bunny to read, explaining to Gwen that he is the Cracksman : and Bunny swallows the bait and tells Bedford, thus freeing Raffles of any obligation to him regarding Gwen.

Acting on Bunny's information Bedford releases Crawshay, and has him trailed as he goes to Raffles's rooms after the pearls. Gwen comes to warn Raffles that Clarice exposed him, and has to be hidden when Crawshay breaks in. Raffles outwits Crawshay and sends him off, but simulates having been tied up ; and is found thus as Bedford enters with the Police. Then, it being eleven o'clock, he claims his won wager and via secret doors he eludes Bedford and escapes with Gwen.

Scotland Yard admit having nothing against Raffles as he never failed to return what he "stole" : and Raffles and Gwen are sped on their honeymoon by a forgiving cable from Lord Amersteth.

A glance at the verbs in this treatment will indicate its uncinematic nature : "*proposes*," "*pleads*," "*ridicules*," "*wagers*," "*arrange to leave*," "*tips off*," etc., involve dialogue titles, and are the danger lights in a silent film script. Compare *The Lighthouse by the Sea*, in whose treatment only two verbs ("*insist*," and "*advise*") denote other than positive pictorial action. The next point about the narrative is that it lacks background interest : there is a reel set on board ship (three sets), two reels in the mansion (huge hall, billiard room, bedroom, and three exteriors that simply reek of the studio), and finally two reels in Raffles's London rooms. Except to the very innocent, this arrangement yells "Stage Play."

Again, the narrative has no proper modulation : no gradual rise in pitch up to a defined climax. It just jogs along at approximately constant measure till it fizzles out in the anti-climax. Finally, there exist discrepancies between the book characters and the screen characters which, though essential for censorship and other reasons, militate against acceptance of the screen narrative : thus, it is understood that Bunny knows Raffles *is* the Amateur Cracksman, whereas here he "discovers" it late in the film. Also, Raffles always in fact lived on the proceeds of his "borrowings," even though the surplus went to Charity.

It must also be recorded that there is a case of cheating in the screen story : how Raffles achieved the first (necklace) theft is not shown, nor even suggested. This is the last resort of the barren author. A similar case occurred in the English film *Pimpernel Smith*, where a shot of blood dripping from a "scarecrow" was supposed to explain just how Smith organised and carried out a large-scale escape. Such actions are the key actions of melodrama, and they must be fully shown or fully suggested, otherwise the very foundation of the tale has gone and the author (or director) has broken faith with his audience. The exception is, of course, the case where mysteries occur and are only explained (but fully explained) at the end.

According to the custom of Universal Pictures, the leading parts are introduced with pattern-background titles bearing the player's name. Some of the titles are set in an inferior type, different from the majority : these are the ones that have been specially prepared for the English version, due to spelling and dialogue peculiarities.

The film opens, after a redundant prologue, with a fine long shot of a dance on board ship : news is received of the Amateur Cracksman's latest exploit ; then Raffles, laughing lightly, crumples the news-sheet and tosses it into the wake. Bunny joins him, and admits having passed a bad cheque. They walk a few yards along the deck, and two remarkable things happen : Raffles suddenly is smoking

and the camera becomes unsteady—and we realise the cameraman has recalled he's aboard ship and is futilely attempting to portray the ship's motion. Raffles silently hands Bunny a wad of notes. This action is somehow "what would not be done by a Gentleman and a Cricketer." It is also puzzling that Raffles should wear a dinner-jacket against Bunny's tails, as they are specified as intimate friends. Cumulatively, these snags are disheartening.

Clarice next joins Raffles on the deck, and starts a laboured conversation that is interrupted by an elderly couple showing the news-sheet to Raffles, who warns the lady to be careful with her necklace.

Raffles and Gwen—politely astonished.

Two more continuity titles and mid-shots introduce first two dusky gentlemen of India (a pointless red-herring) and second, Bunny gambling again: in background, Raffles watches through window. Then . . .

1. L.S. Group talking, including lady with necklace
2. C.S. She talks . . .
3. C.M.S. (at a window) Raffles looks . . .
4. C.S. She talks, fingers necklace . . .
5. CM.S. (at a window) Raffles looks . . .
6. M.S. A gent remarks to one of the Indians . . .
7. TITLE "*They say Mrs. Tilliston wears the famous Rajah necklace tonight.*"
8. M.S. (as 6)
9. C.S. (as 2 and 4) a shadow of a hand appears on the wall behind her and suddenly the necklace is whipped away. She yells.

Then a mild commotion follows, and Raffles wanders up smoking like a chimney, and remarks to Clarice who has eyed him meaningly: "*There appears to have been a jewel robbery.*"

The grand search at Tilbury includes Mr. Tilliston, who is vastly indignant (the one good bit of comic relief) but is soothed by Raffles's present of a box of cigarettes: a very nicely done double mix shows the necklace hidden behind the cigarettes, together with a note directing payment of the reward to Charity. So, neatly, Mr. T. walks off the ship carrying his wife's diamonds.

Raffles's London rooms are beautifully reproduced in an excellent set, impeccably lit in the "all-over" style and quite free from high-spots, which is an achievement when the set walls are polished oak panelling. We also see the landing, with a splash of sunshine, as Bunny calls and enters. After some painfully redundant titles, they decide to week-end with Lord Amersteth.

A full long shot shows the fine old hall, and a close mid shot of Lady Amersteth with Clarice on a sofa follows: they are seated near together, but in their individual medium Close-ups each is obviously alone—a disconcerting error of camera angle. Then, unbelievably horrible—

1. L.S. (exterior, garden, night) (gauze, black ringed) Raffles and a girl . . . .
2. M.S. They stand talking.
3. TITLE LADY GWENDOLYN AMERSTETH —. . . . Miss Du Pont.
4. C.S. She looks up coyly and says . . . .
5. TITLE "*How strange! I never saw you until yesterday, yet I feel I've known you always*"
6. C.S. She says.
7. C.S. Raffles expels smoke, and replies . . .
8. TITLE "*Friendship isn't a question of time, but of understanding, Lady Gwendolyn.*"

The night-time exterior lighting is fairly good, but the available prints are tinted amber throughout, whereas these sequences should be blue. The gauze softening is not well done: there is halation. Better lit is the exterior of the front of the house, as Bedford is driven up (in the famous Hollywood Rolls Royce). Within, Lord Amersteth greets him. The glimpses of the porch and stairs are good: the atmosphere of the house is well portrayed. Bedford states the Cracksman is to be expected. Bunny sends Raffles into the house, and is left alone with Gwen and a Cupid statue. Raffles mocks Bedford in a lengthy sub-titular conversation, till Amersteth suggests billiards. Meanwhile, amid different statues, Bunny is turned down by Gwen. Much footage is then devoted to Clarice sparring with Raffles in the billiards room; Lady Amersteth taking off her pearls, and retiring; and Lord Amersteth demonstrating his burglar-proof safe, with comments about the danger, the possibility of the Cracksman

Crawshay, definitely perturbed.

being actually present in the room, and so on. His Lordship duly puts in the necklace-box.

Meanwhile a crook climbs over the garden wall and remarks to the housemaid, who meets him, "*You git der pearls—I'll do der rest.*" (The queer dialect was done for the English version). Lord Amersteth demonstrates the alarm : the whole estate is lit up : all rush into the hall : Raffles wagers Bedford he will *not* capture the Cracksman. The whole is slow and painfully over-titled, though there are one or two good reaction Close-ups, particularly from Hedda Hopper, whose portrayal of Clarice has nice touches of comedy and sly smiles.

Bunny gnaws his lip and drinks whiskey ; Raffles smokes furiously, and in more titles it is decided that Raffles will "put in a word" with Gwen if Bunny stops drinking. Raffles therefore hails Gwen as the two girls are going up stairs : and in a ghastly mid shot Gwen smiles brightly while Clarice looks grim. And, in a pleasing angle-shot looking down the stairs, Clarice goes up alone. Meanwhile, by matchlight, Bedford closely examines the cigarette-end left by Raffles after his recent talk to Bunny : but the shot is quite incomprehensible at the first viewing of the film, being insufficiently explicit.

Back in the studio garden Raffles cuts Gwen a studio rose, which she carefully smells. He pleads for Bunny in medium Close-ups taken from his right side but nearly full-face, and she listens in nicely-lit diffused Close-ups, also nearly fullface but taken from *her* right side also—a curious technical lapse which does not always matter, but in this case gives the strong impression that they are looking in the same direction instead of at each other. The sequence is 52 feet long (that is 1¾mins., having been shot at 20 frames per sec.) and contains five titles. Miss Du Pont's eye-work in the last Close-up is truly horrible. This actress's complete failure to portray a likely Lady Gwen is bewildering. She had the good fortune to play opposite Erich von Stroheim in *Foolish Wives* in 1921, and late that year was boosted enormously by Universal as their new discovery. Von Stroheim's direction was painstaking, detailed, impressive. An article in the Motion Picture Classic of October, 1921, entitled "A Million Dollar Miss" ends thus . . .

Miss du Pont is going to be popular, in spite of her name . . . "I want to play straight American woman parts," she said to me, while the assistant director was bribing the gardener not to burn weeds so that the smoke would blow into the scene. "The American girl is always an interesting person, and if I can put over good, clean, young womanhood in my pictures, and do it convincingly, I will be happy."

She made a few starring vehicles then dropped to featured parts as in *Raffles* . . . yet another case of a great director drawing a fine performance from a player who is later found wanting without his guidance.

In a short sequence containing quite a nice but pointless mirror shot, Clarice warns

(*Continued on page* 318)

Lord Amersteth, absolutely flabbergasted.

The

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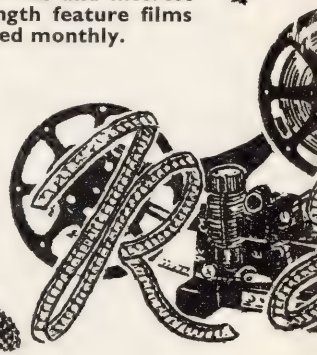

One of the many exciting moments in "Spy in White" featuring Valerie Hobson, James Mason, Kay Walsh, Peter Haddon.

amusing scene om "The Lad" arring Gordon rker & Jane Carr.

Below are listed a few of the popular Stars in "Features" recently released from the Library.

Ann Rutherford. Ann Harding. Basil Rathbone. Basil Radford Bruce Seton. Betty Stockfield. Ben Lyon. Clive Brook. Conrad Veidt. Conrad Nagel. Diana Churchill. Elsie Randolph. Esther Ralston. Edgar Kennedy. Geraldine Fitzgerald. Garry Marsh. George Sanders. Gordon Harker. Ginger Rogers. Henry Kendall. Hughie Green. Henry Oscar. Hedda Hopper. H. B. Warner. Jack Buchanan. John Stuart. James Mason. Jane Baxter. Judith Allen. Ken Maynard. Kay Walsh. Mary Lawson. Noah Beery. Seymour Hicks. Stanley Holloway. Sari Maritza. Tom Walls. Tully Marshall. Valerie Hobson. Victor McLaglen. William Haines.

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Portable Projection

by Terence V. Strong

IF wishes were horses then beggars would ride. I suppose that most cine projectionists wishing to transport their outfits would choose a car as the ideal carrier. The hard fact is that a great many of us have not cars and still wish to carry the gospel of substandard cine into the houses of our friends and acquaintances. The purpose of this article is to demonstrate that the owner of a mere bicycle can be a one man-power mobile projection unit.

The first illustration shows the projector carrier. The case is the manufacturer's delivery carton. The waterproof jacket was made on the sewing machine from the good parts of a cycle cape which had begun to deteriorate at one or two key points. Chair webbing sewn to be a tight fit gives rigidity to the otherwise rather flimsy case.

To change over from hand carrying to the requirements of cycling it is only necessary to fasten one end of an eight foot length of webbing to the buckle (A), pass the other end through the loop (B) and through a corresponding loop on the other side, and attach it to another buckle opposite (A).

The projector can then be carried in the manner of a knapsack (see ill. 4). The buckles allow of adjustment for comfort. The width of the webbing reduces chafing to a minimum. As regards weight, my own projector is a transformer model Specto, which is, I should think, an average load. I find it much less fatiguing to carry it thus than by hand in the manner of an attache case. The projector is wedged in the case by a sponge rubber pad (sold in Woolworths as a kneeling mat) which helps to absorb any jarring from uneven roads. It also makes a useful projection mat which reduces vibration noise and protects highly polished furniture.

Besides the projector, this case carries the splicer, film cement, and a length of adhesive tape cut to gauge width for first aid in the event of a break during projection. Also included is a small bag containing four or five different plugs, a bayonet adaptor and a small screwdriver with which to cope with other people's electricity points. Both lamps, that is the one in use and a spare, I carry in an inside pocket, because the human body is a first class shock absorber.

Fig. 1. Projector carrier and water-proof case.

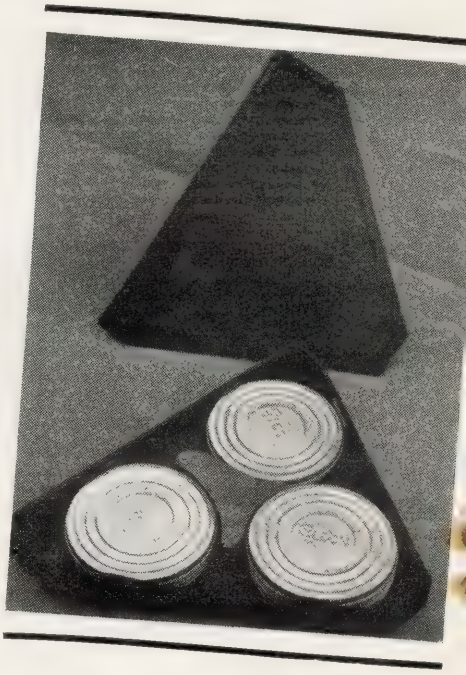


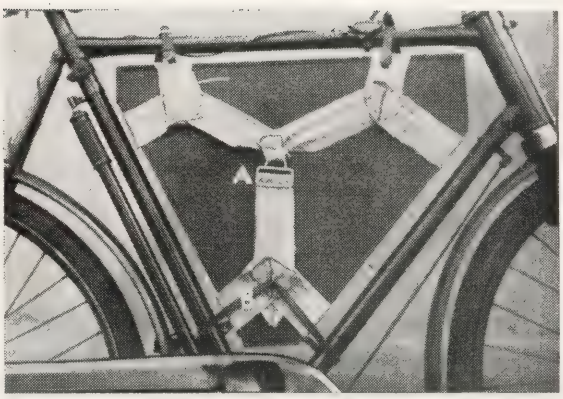
Fig. 2. Accommodation for the reels and film.

A point not shown in the illustration is that the flaps of the waterproof cover are held in position by strong rubber bands looped round the harness on one side and stretched across to a hook sewn in the opposite cross-piece. An equally good cover could be made from a piece of groundsheet material.

The screen, a 40″ x 30″ roller type, is also carried in the original cardboard box, and similarly protected from the weather. On two hooks, one at each end of the screen roller, is wound a twenty-foot length of electric flex. This is long enough to reach the fantastic positions in which all power points except those in one's own house are situated. Leather straps passing through the webbing bands attach the screen case to the bicycle in the position shown in the fourth illustration.

There remains to provide accommodation for reels and film. The box shown in the second illustration fits into the cycle frame. The top and bottom are of three ply and the sides of 2″ x ¼″ soft wood. It holds six 9.5mm. reels and cans. The points of contact between the cans and the sides of the box are cushioned by small pieces of sponge rubber, and the cans are kept apart by a shaped pad of several thicknesses of the same material.

By this means and by wrapping each reel in a double thickness of tissue paper before placing it in the can, all rattle and jarring is eliminated. A waterproof cover was made from the rubber sheeting already mentioned. The third illustration shows the box in position, without the cover, to show the webbing harness more clearly. This serves the double purpose of suspending the box in the bicycle frame and at the same time holding the lid firmly in position. The buckle and strap (A) provide the necessary tension for this latter purpose. The straps for attachment to the frame pass through small keyrings let into the webbing. Tightening of the strap (B) has the effect, by reason of the V-shape of the frame, of straining the film carrier away from the upper tube of the triangle and so maintaining a tension which prevents contact between box and frame.



Above: Fig. 3. Box in position without cover.

Below: Fig. 4. Mobile projectionist in action.

The mobile projectionist in action is the fourth illustration. I have frequently cycled distances up to fifteen miles so equipped, without experiencing undue fatigue. At such time as I acquire a double turntable and amplifier I hope to stretch a point and include a car in the purchase.

Secretary: **C. LESLIE THOMSON, B.Sc.**

Secretary's Report The questions dealt with this quarter have been numerous and although there have been no more requests for battery pre-amplifier circuits, many demands for circuits of complete amplifiers have come in. Naturally, it is not possible to provide these individually, but we shall attempt to meet these querists in this issue by giving basic details of three widely-applicable types. These are the result of examining many professional amplifiers, and also of extensive practical experiment, to determine the most efficient arrangements, consistent with stability and adaptability. Some of the details given in last issue regarding screening, etc., may be referred to in conjunction with this article.

We welcome to the "T.I.D. Board" two new members: Mr. Verney, whose forte is engineering, and Mr. Bradley, whom an existing member describes as a "wizard wangler"! One of Mr. Bradley's recent feats was the adaptation of a Pathe Vox 400 to take a 250 watt lamp of reasonable availability.

Mr. Philip Jenkins has prepared a short treatise on Sound Tracks, with particular reference to sub-standard practice, and dealing with the effects on reproduction of some of the "far too common" faults in printing and processing. Also methods of checking the scanning-width and adjustment of the projector are described. This treatise, like the already very successful Notes on Sound-on-Film Recording, by Mr. Roe, will be available to readers on request, and in strict rotation. Please remember the stamped envelope!

Mr. Verney has reported his conversion of a Eumig III (9.5) which is on very sound lines. The two photographs will give a general impression of the outfit, and the following points are of note:—The head is of the driven type, with built-in constant-speed motor. The scanning is on a rotating drum, flywheel-damped, and a Dallmeyer type C optical is used. A 16-tooth sprocket-wheel provides a smooth and safe drive for the film, and a "tension-equaliser" minimises the starting-strain on the film. A safety-trip is provided, which actuates a mercury switch in the event of the loop shortening.

Mr. Verney stresses the importance of really high finish in amateur mechanism of this type, and expresses the feelings of many when he suggests the value of an independent examining body to whom amateur conversions could be submitted for approval, or otherwise. Unfortunately, the difficulties in the way of such an arrangement are numerous at the present time, but we all look forward to the day when it can be realised.

Not unconnected with this idea, and apparently considered overdue by some correspondents, is the "important business" of this meeting—a statement on minimum standards for amateur conversions

Minimum Requirements

There is little doubt that the majority of amateur conversions cannot be described as "first class." By this we mean that most such apparatus is built with the primary object of being able to project sound films with the minimum expenditure on work and materials. In only a very few cases is there any attempt to equal or surpass commercially produced apparatus, either in finish or in quality of results. With the rest one finds that compromise looms very large in the picture.

So long as the amateur restricts his activities to experimenting with pieces of machinery nobody can have the slightest objection. But when the same enthusiast begins to borrow or hire library films, the quality of his apparatus becomes a matter of public concern. We have frequently stressed the necessity of testing a conversion carefully for film-wear before running any library film through it, but there are other equally important considerations. For instance, if by chance there should be a few torn perforations in a library film, what would happen to it in your conversion? Would the film be further damaged before you could stop the motor and switch off the lamp? Or would the total damage be a brief stop

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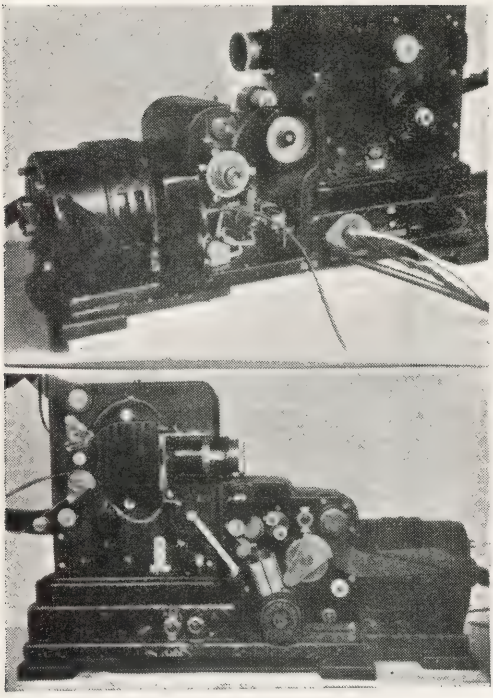

Photos: Mr. Verney's Eumig Conversion.

in your performance for re-threading? In other words, one must anticipate all possible mishaps, and consider the likely results.

Again, it is not enough to copy the design of mechanism in a commercial job. In the first place, unless the finish is at least as high, your version may inflict serious injury on the film. Also, manufacturers are not superhuman, and some of them have been known to make mistakes!

The following notes, which are the combined work of several enthusiasts, are intended to help amateurs both in the choice of available apparatus, and in estimating the value of proposed or completed conversions, The points are divided into groups; those essential for film safety. those essential for sound-quality, mechanical essentials, and "near-essentials," which distinguish the first-class from the mediocre job. It should be recorded that there were differences of opinion on some points among the contributors, but mostly these concerned the category in which the point should be classed, and not the importance of the point itself. It is not possible to give full reasons here, but where it may be obscure, a short explanation is given with the "point." The points in the first three groups are all "MUSTS," they are not just "shoulds."

Film-Safety Essentials

Picture-gate incapable of scratching sound-track.

Sprocket-wheel "cradles" ditto.

Converted 16mm. sprocket-wheels highly polished.

Pressure-pads only permissible in picture-gate, in which case they must be of hard, polished metal.

Two claws minimum for intermittent movement.

At least four teeth in engagement with film at sprocket-wheels, especially at driving points.

Any idler-rollers must make contact with either entire film surface, or extreme margins only. (i.e., no "shoulder" coinciding with sound-track.)

If fixed-drum scanner, high finish essential, also carefully smoothed edges to scanning-aperture.

If projected-image-of-track scanning used, illumination must not be intense enough to scorch film in event of stoppage.

Tension on film to be low throughout, whether imposed by friction, damping, or spring-loading.

If constant-speed motor used, must start smoothly. (i.e., power not abnormally high for machine.)

All parts touched by film to be of high finish, preferably either stainless steel, or polished chrome-plated.

Exciter-lamp, if high-wattage, well ventilated to keep metal of sound-gate cool.

Safety-trip to stop projector if loop lost, or wrongly threaded.

Sound-Quality Essentials

Flywheel-smoothing at nor near scanning-point.

Scanning-point reasonably close to driving-sprocket (to reduce "wowing" effect of shrunk film).

Motor-speed positively controlled, either by mains frequency, or by governor. If governor, then preferably electrical in action.

Intermittent motion completely damped-out before scanning-point.

If fixed-drum scanning, smoothing roller between this and drive-sprocket, to remove "sprocket-pick."

Quiet-working projector, preferably enclosed in well-ventilated "blimp."

Amplifier of suitable design and of ample power.

Mechanical Essentials

"Open" film-path. (i.e., Film can be threaded or removed part-way through run, and allows loop film to be used for testing, etc.)

Projector and Exciter lamps replaceable instantly, even when hot.

Valves replaceable in a matter of seconds, without dismantling apparatus. P.E.C. reasonably accessible.

Safety-trip—light in action—should stop projector dead in less than two seconds. (i.e., With high-speed motors a brake, or dog-clutch may be necessary.) Lamp should be switched off at same time, or shutter come into action.

"Near-essential" Refinements

Scanner of the rotating-drum type, flywheel damped.

Sound-head mechanically insulated from vibration of projector.

Drums, rollers, and driving-sprockets all of large diameter. (To minimise effect of variations in film flexibility.)

"Hold-back" sprocket wheel between sound-drive and take-up reel. Alternatively, spring-loaded "tension equaliser." (To absorb any tugging of take-up, which would otherwise be transmitted to the scanner.)

Exciter-lamp either:— (a) of 10 amperes or more. (b) Fed with Direct, or smoothed rectified current, (c) Fed with high-frequency A.C.

Exciter-lamp positioning adjustable with precision. (Simple clamp is unsatisfactory, and even "prefocus" lamps require fine setting for best results.)

Emulsion-side of film to face optical-system of scanner. (Side facing screen in 16mm., away from screen in 9.5mm.) (Ideally, the emulsion side should be against the drum, to avoid out-of-focus due to variations in film thickness.)

Amplifier provided with input points for gramo. pick-up and for microphone.

Tone-control to give predominance to bass *or treble.*

Spool-arms to take 1,600 ft. spools (16mm.) or 900 ft. spools (9.5). In either case, adequate drive for take-up must be provided.

Apart from these points, there are many other obvious items, such as adequate illumination for the proposed screen-size, provision of "silent-speed" drive, which will almost certainly be required, and which should not entail any dismantling of the projector to connect. Most important of all and incredibly often overlooked, is the absolute necessity of a really substantial and rock-steady projector, with plenty of reserve mechanical strength, and made to precise engineering standards, as a basis for the conversion.

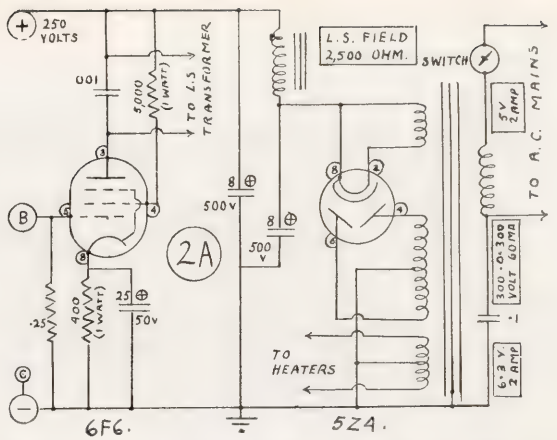

Fig. 2A. Output section and power-supply for 3.5 watt amplifier, for A.C. mains only.

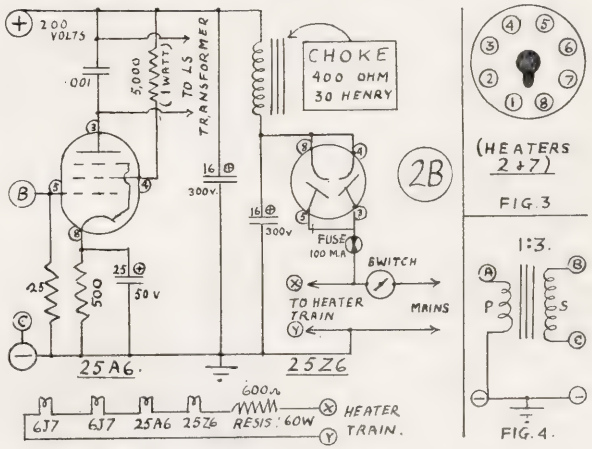

Fig. 2B. 2.5 watt amplifier for A.C./D.C. mains.
Fig. 3. Key to valve-base numbering—seen from below.
Fig. 4. Transformer coupling for increased gain. See text.

Amplifier Circuits

An amplifier can be considered as having two

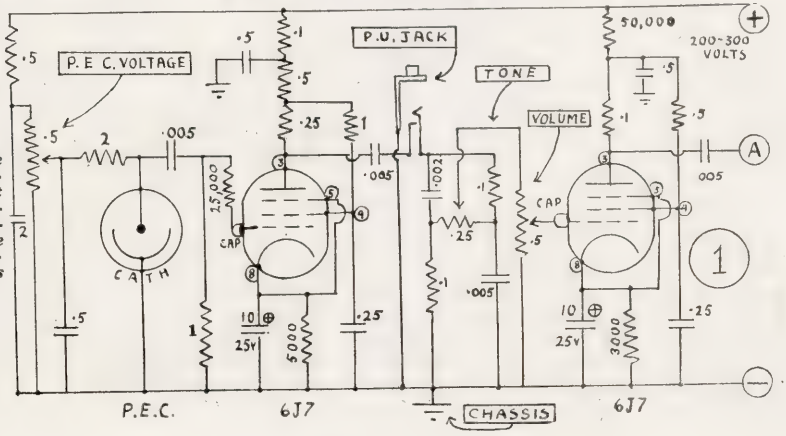

Fig. 1. The "voltage-gain" part of the amplifier, common to the three alternative circuits

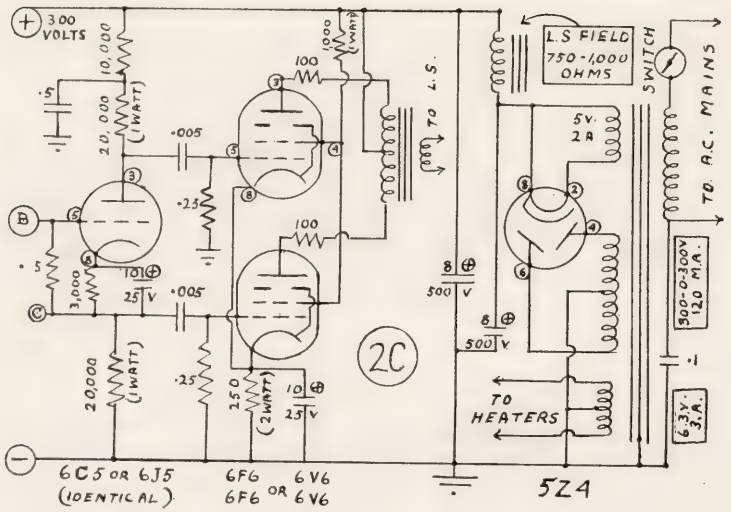

Fig. 2C. Phase-inverting and output stage of 8 or 12 watt amplifier, for A.C. mains only.

parts:—the early "voltage amplifying stages, and the output or power stage. In the following circuits, the "First Unit" is common to the three alternatives, and consists of two high-gain valves. The unit is designed to give first-class results under widely differing conditions, and can be coupled with a choice of output stages, to suit the individual worker. In addition, a transformer coupling is described, which will increase the gain considerably, should this be found necessary in special cases.

The International Octal type of valve has been selected as standard, and a short table of alternatives is given. Regarding the components, all resistors can be of the small half-watt type, unless otherwise indicated. Condensers should be of the paper type, tested to 400 volts, or higher, unless electrolytic types are indicated by a small "plus" sign on the positive side. In these cases the working voltage is also given. Under present circumstances exact values may not be available. In general it is safe to use *higher* values of either resistors or condensers than shown, although any such deviation should be small proportionately.

The First Unit (Fig. 1) contains all the controls—P.E.C. voltage, Volume and Tone, and has provision for pick-up. The tone-control is of the bass-or-treble-lift-type. Two H.F. pentodes are used, giving a total gain of 7,000 or more. The reason for preferring these more expensive and more complex valves to triodes of comparable gain is that really high-gain triodes are exceedingly microphonic in such circuits, whereas pentodes (with wider-spaced electrodes) are quite immune. The First Unit must be very carefully screened, and it is advisable to enclose the first valve completely, along with its grid-connection, in a screening-can. The 25,000 ohm resistor should be inside this screen also, and must be right up against the grid-cap of the valve. If the entire amplifier can be housed in a metal box—perforated for ventilation—so much the better, but a metal or metal-lined chassis is essential to house the components.

Brimar, U.S.A., Mullard—						
6J7	6C5 6J5	6F6	6V6	5Z4	25A6	25Z6
Osram—						
KTZ63	L63	KT63	—	U50 U52	KT32	U31
U.X. Base						
6C6	76	42	—	80	43	25Z5

Table of valve equivalents. Osram are interchangeable with International Octal range, U.X. bases are not interchangeable.

Three output circuits are given, with their respective power supplies. Fig. 2A shows a simple single-pentode circuit, giving about 3½ watts on A.C. mains. 2B is a similar circuit, but suitable for AC/DC operation, on mains of 200 volts or over. The output from this is lower than the A.C. version, but should be ample for small rooms. 2C is a push-pull circuit, giving 8 or 12 watts output, depending on the valves used. (A G.P.O.

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TRACKING IT DOWN (*Continued*)

permit is required to purchase 6V6 valves.) Ordinarily the First Unit is coupled with any one of the output units by connecting A to B, and the H.T. and chassis (minus) points of each unit to the other. Point C can be ignored. If increased gain is found necessary for any reason, a small parallel-feed transformer of 1:3 ratio can be used, in which case the connections are shown in Fig. 4. (A to A, B to B, C to C.) The transformer will have to be orientated so that it does not pick up hum from stray field of mains transformer or choke.

Output 2A is straightforward, and should be used with an energised speaker of approximately the specified field resistance. The " pentode " terminals of its transformer should be used. The figures in the small panels beside the mains transformer indicate the rating of the windings opposite. The switch should be on the " live " side of the supply.

Output 2B. A permanent-magnet speaker is required, and the H.T. is smoothed by a low-resistance choke, so as to keep the voltage as high as possible. The 600 ohm resistor in the heater train must be of the power type, preferably in the form of a barretter tube, or vitreous wire-wound resistor. Much less desirable is a length of " line cord resistor." All three require ample ventilation, as about 60 watts is dissipated in the form of heat. In this circuit it is particularly desirable to have the switch in the live wire, which, with some D.C. supplies, may mean that it is on the negative (chassis) wire. The chassis will be live in these cases, and should be properly protected by wooden or other insulating material.

Output 2C. In this the 6C5 (or 6J5) valve has a dual function. It amplifies, and it provides the opposing phases required for the push-pull output valves, without the use of a transformer. Actually its amplifying effect is small, unless the parallel-feed transformer coupling is used (Fig. 4) in which case it is greatly increased. This valve is " up in the air "—i.e., its bias and grid resistors, and the bias condenser are not connected to the chassis. The reason for this strange state of affairs is that we wish to produce a signal " opposite " to the normal for one of the output valves, and this is generated across the " lower " 20,000 ohm resistor, which must not be " shorted " by any other component. The output transformer may be incorporated in the speaker, but if the higher (12 watt) output is desired it may be better to use a heavier unit than usually supplied with the speaker. As with the others, the switch should be on the live wire.

In the diagrams, the heaters are not shown, but in all valves except the 5Z4 these are connected to pins 2 and 7 (Fig. 3). U.X. based equivalents are mentioned, but the connections to these are quite different. Details, if not available locally, will be forwarded on application (accompanied by the usual stamped addressed envelope for reply), as will suggestions for other makes and other heater-voltages in individual cases.

The beginner can be assured that the simpler circuits are well-tried and reliable, while the advanced worker can rely upon the push-pull job to give first-class quality, BUT THESE ARE **CIRCUITS** ONLY and much depends upon careful arrangement of components to allow short direct wiring, and to prevent interference between the stages.

NEXT MEETING

A selection of replies to readers will be reproduced in the next issue, and also we hope to give constructional details of two items mentioned in the "Minimum Requirements"—a "safe" gate for 16mm. projectors, and an electrical governor for brush-type motors.

(A small, but possibly troublesome error occurred in the circuit diagram on page 278 of last issue, describing the All-Dry preamplifier. There ought, of course, to be *no* line in the drawing between the H.T. — lead and the switch on the 1.5 + lead (bottom right corner).)

The Heathcote Sound-head

The makers of this apparatus have pointed out that the review (Sept-Nov. issue) contains a misstatement as to the interval between picture and sound-gate required in threading. By some mischance the instrument was incorrectly fitted during test, and actually an interval of as little as 24 frames is possible with the correct fitting. We apologise to Messrs. Heathcote for any inconvenience this error may have caused them.

Substitute for Pathe Lamp

As a substitute for the Pathe H. lamp, very difficult to obtain just now, Helios Electric Lamp Works, Ltd. announce that they are using a 115 V. 100 W. A.S.C.C. Kodascope lamp of similar dimensions. They remove the existing cap and fit in its place the cap of an original burnt-out Pathe H. which they prefocus to the required L.C.L. The old lamp must accompany the order.

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Details of prices, etc., may be obtained from Helios, 6, Angel House, Angel, London, N.1.

Ditmar Servicing

Messrs. Actina, Ltd., of 19, Woodstock Street, New Bond Street, London, W.1, inform us that they are still in touch with the mechanic who, as a member of their servicing staff before the war, effected repairs of Ditmar cameras and projectors. The firm are able to supply him with a few spares, and he is in a position to undertake a few repairs.

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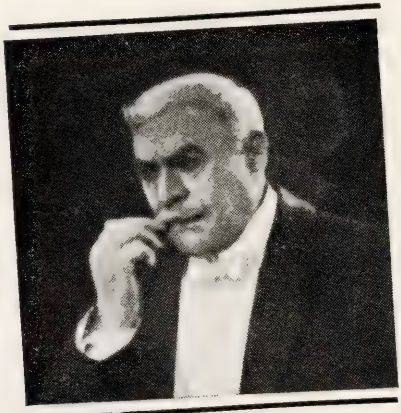

Bedford—baffled again.

RAFFLES (*Continued from page 305*)

Lady Amersteth, who is having a mud-pack treatment. These details are presumably intended to add production value, but they distract. Gwen trips upstairs, tossing Raffles her rose—and in a medium Close-up he acts the dawning of Gwen's thoughts in his mind very well indeed. Then Bedford strolls up, and he waves the rose with charming, studied nonchalance.

Briefly and efficiently we are next shown, all in long shots, the crook climbing over the wall ; the maid stealing something from under Lady Amersteth's pillow ; and Bedford falling asleep : but by a pure coincidence, which weakens the credibility of his great reputation, Raffles sees the crook and follows him in and catches the pearls as they are dropped over the bannisters. Here the action is good but the lighting all wrong : the window is absurdly bright, and the direction of the strong shaft of light that enters the doorway varies in direction and brilliance between long shot and mid shot, and later completely disappears.

Excellent dramatic counterpoint has been achieved between Bedford's sneer at Raffles's assurance that the pearls are safe ; the discovery by Lady A. that they've gone ; and the finding of the empty case intact in the famous safe. Ingeniously, too, the excitement brings the girls out of bed and enables them to show how cute their hair can be, all hanging around them. A really sly smile plays round Clarice's lips, in her Close-up glance at Raffles. The sequence fizzles out in titles, as Bedford wagers he'll recover the pearls, and they both arrange to leave early for London.

Confusingly, early next morning, it is Clarice who leaves by car, after an absurd struggle by the chauffeur with his hand brake. Why this ridiculous shot was not re-taken is baffling ; unless this was the second take, used for the export copy negative. The men must have left even earlier, we gather, because we next see Raffles and Bunny in London. Raffles has started a letter to Gwen which reveals his feelings to her, and Bunny enters and reads it. It is not made clear whether the letter was left deliberately (as stated in the treatment), but that Raffles should leave so intimate a note and should also fail to prevent Bunny seeing it are quite unthinkable. But the director has erred again in permitting this confusion.

A neat angle shot through the leaded window shows two police blokes watching outside. Bunny goes and spills the beans to Bedford in his office. As in Raffles's rooms, the glimpses of London through the windows are good, and well lit.

Crawshay enters via a roof-top set which is excellent, with its background of Big Ben, and smoking chimney-pot in the foreground, and traces of fog, but marred by the facts that the beam from the studio lights can be seen at the right side, and that Crawshay casts a shadow on to the back-drop.

Plain-clothes men report the entry by 'phone, and a cutting error occurs, as they speak again after Bedford has hung up. He glances at his watch . . . C.S. watch shows a quarter to eleven. At least six frames too many are left before the C.S. starts, a typical example of the too-leisurely cutting.

Gwen's unexpected arrival, the inevitable "*I believe in you*—" and embrace, and her concealment as Crawshay arrives, are stolidly

(*Continued on page 320*)

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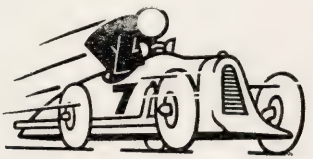

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RAFFLES (*Continued from page* 318)

shown. There could easily have been a moment of suspense, or some trace of subtlety, but these factors are conspicuously absent. Crawshay demands the return of the pearls, and accidentally finds Raffles's pistol and threatens him, but is caused to drop it by an eloquent speech about death sentences. The number of titles in this sequence is frightening.

Shots of bewildered Gwen in her cupboard are cut in as Raffles disorders the room and binds himself, and sends Crawshay away. Bedford and his men first rattle the door-handle then quite easily open the door and walk in—another stupid weakness. Raffles acts dizzy and plays out time till eleven o'clock. Then he claims his wager, fools Bedford by a simple trick of going to the inner room to pack a few clothes, which would not have taken in a ten-year-old sleuth, and easily escapes with Gwen, via secret doors that open and shut at a touch on the panelling. Even this sequence fizzles out, ending as it does with a note to Bedford and a 'phone talk with Lord Amersteth : and again Bedford hangs up before Lord A. has finished speaking.

At this point, it will be seen that the film is finished : the Raffles character has been portrayed, and his happy-ever-after with Gwen fully established. However, it runs on for a further four minutes, with two sequences. The first, in a room at Scotland Yard, has Amersteth, Bedford, and a Superintendent, with a letter and five titles, explaining that Raffles was no crook : the second shows the Happy Couple on board S.S. Olympic, receiving a hearty cable from Lord Amersteth, and doing a comic gag with a pencil that is simply pathetic.

Consideration of the production phases will throw further light on the causes of this film's unfortunate weaknesses . . .

SCENARIO. As explained above, the adaptation is bad in that characteristics have been altered whilst stressing character touches. Also, the dramatic structure is weak. The number of titles, totalling 180, that is one every 22 seconds on the average, should have warned everyone concerned. Some excuse may be made for the laboured insistence on Raffles's honesty, due to Censorship. The narrative suffers also from stray ends—e.g. the housemaid.

DIRECTION. A two-column letter in the American "Motion Picture" of July, 1923, extols director King Baggot up to the skies and includes the passage . . . "Everyone of his pictures bears an indelible stamp of *sincerity*, and his attention to every minute detail is unsurpassable. King Baggot!" Here, however, we have to blame him for a deathly slowness, for shots of people talking and talking instead of *doing* something, for permitting dramatic unbalance, for extracting from his cast more calculated and stereotyped gestures than could easily be equalled, and for failing to insert either thrill (it *is* a crook picture)

or suspense (in the escape). The Cupid statue symbolism is ghastly, and the crumpling-up of the (Studio) rose a silly impossibility.

CONTINUITY. Such errors as Clarice leaving early when the previous title had led one to expect Raffles and Bedford, add to the confusion of a vague scenario and weak direction. Vanishing cigarettes, and Raffles's fire screen, which is flung on its face in a huge Close-up, but is still as it was in the following long shot, are pieces of gross carelessness.

PHOTOGRAPHY. Though this is good and efficient in avoiding wrong shadows and giving reasonable "depth" for the most part, the complete lack of any attempt whatsoever at pictorial composition is deplorable. The number of dead-centre head-and-shoulder medium Close-ups is terrific. The camera is, of course, used entirely objectively. Charles Stumar also did some of the Denny comedies, and *The Cohens and Kellys*, (1926), etc.

ACTING. For a good class American picture this is, on the whole, unusually bad. No acting moments stick in one's mind except possibly Raffles and the rose, and Clarice's insinuation. Not one of the players ever did anything really "big" on the screen, though Peters played numerous good stellar roles, and Hedda Hopper was a featured player for years. She recently did a nice job as the Aunt in *Reap the Wild Wind*. Winter Hall's Lord Amersteth, and also Crawshay (unnamed player) are competent and realistic.

MONTAGE. No attempt at proper shot matching, no inspiration in arrangement even of those reaction Close-ups that are well-directed, and a hopeless lack of slickness. For an American film, incredibly bad.

GENERAL. Of the previous three American feature fil ns reviewed in this series, one had epic quality, one was a first-rate adventure yarn, and one was a top-class melodrama. In analysing *Raffles* we have taken a film made by an established director for a big company, with a good cast and a popular star. That the result should have been so disastrous is due to the facts revealed by dissection of the production phases: and from all this one's store of knowledge is increased just as by the study of a big success. We must sympathize with these good people that their efforts, which were doubtless considerable, yielded so poor a result. And it is remarkable and uncanny that, despite all, one cannot help remembering the film, with its fine old house and oak panelling, and one or two at least of its actors, with quite considerable affection.

CIVIL DEFENCE FILMS.

A very useful list of films on Civil Defence and Fire Service has been prepared by the "A.R.P. & N.F.S. Review," in co-operation with the Institute of Civil Defence and the British Films Institute, assisted by A.C.W. and the Central Film Library.

Sixty-nine films have been listed and are well classified, data being given as to subject, size, length, date made, conditions of supply, etc.

The majority of the 16mm. films are silent, and there are two 9.5mm. productions and one 8mm. colour. Subjects include shelters, control, posts and depots, fire guard, first aid, police, fire service and anti-gas. Many of the distributors are private individuals and of the films handled by organisations the majority (chiefly 35mm.) come from the Central Film Library.

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Letter File

WANTED—A PROJECTOR FOR THE FORCES

Sir,—Whilst talking to an A.T.S. Sergeant stationed here, I discovered that she has a large collection of 9.5 films, and used to work in a photographic store.

As I, too, have some knowledge of cinematography, we would very much like to make a cinema and entertain the men and girls on winter evenings.

Unfortunately, we have no projector. Do you know where we can, for a few shillings, obtain a 9.5 projector ? GNR. C. F. ADCOCK.

(If any reader of A.C.W. has a projector for disposal, we shall be pleased to hear from him. We are sure that Gnr. Adcock and all at his station would very much appreciate such a kindly gesture.—Editor.)

READERS IN THE MIDDLE EAST

We are always pleased to hear news of readers and it is cheering to know that even amidst the turmoil of war in the Middle East A.C.W. finds old friends who welcome its arrival so eagerly. The following letters came to us by airgraph mail from two readers in the Desert.

Sir,—I have been able to film some interesting subjects since I arrived in the Orient, including a scenic of Cairo and a Documentary of life in War-time in the Western Desert. I look forward to many enjoyable hours at the editing bench on these films on my return to England.

I have used 8mm. in view of its portability, and the results, so far, have been excellent, but I am disappointed at not being able to use Kodachrome, as that stock is not processed in this part of the world.

M.E.F. F. HILL MATTHEWS.

Sir,—This is just to say how much I appreciate the A.C.W. which is sent out to me here in the M.E.F. by my people at home : after four months I have just received the June issue and it certainly is worth waiting for. It makes me feel more in touch with England than any other printed magazine or paper.

I must specially mention the two series of articles "Famous Library Films" by H. Bulleid, M.A., (which make me live again the films) and "Do it Yourself" by G. A. Gauld, Esq. (which interest me being mechanically minded as you can see by my address.)

All the best to A.C.W.

M.E.F. C. W. CRAMP.

CINEX SERVING

Messrs. Cinex, Ltd. have now taken premises at New Stone Buildings, 65/6, Chancery Lane, London, W.C., for the purpose of carrying on their servicing department. They have so far succeeded in retaining the services of their head mechanic who has been with them for a considerable number of years.

AT HOME AND AWAY

(*Continued from page 293*)

inevitably give at any rate a glimpse of our tastes and habits, and so contribute to firmer understanding.

In the case of home showing, silents can be considered a virtue, but for a film show for a reasonably large audience,which expects to be entertained, sound films are desirable. As already mentioned, film shows are usually frequently provided in large camps, either on 35mm. or 16mm. The 16mm. programme may consist of a feature film from the Gebescope and other libraries, a magazine film, a one or two-reel film produced either by, or on behalf of, the Army authorities (typical subjects are "Know Your Enemy," "Anti-Tank Obstacles" and "Name, Rank and Number") designed exclusively for the Services, and the always popular Pop-Eye.

Where silent films only are available and it is intended to screen them elsewhere than in the home, it is useful to contrive a programme designed to foster film appreciation, in which case the classics might well find a place in it, preferably supplemented by a brief talk. The lecturer will find all the data he needs in our "Famous Library Films" series.

If the programme is announced as being designed for those interested in the development of the film, others who want only the kind of entertainment they are accustomed to in the cinema will be forewarned, while the provider of the feast can rest easy in the knowledge that, however small his audience may be, they will be sympathetic and genuinely interested and appreciative.

THE EDITOR.

BOOKS FOR THE CLUB LIBRARY

Every cine club secretary may now obtain free one complimentary copy of each of the successful publications, "Practical Sound Conversion" and "Adapting the 200B to Sound."

This offer comes from the publishers, Cineluxe, 88, Greenfield Avenue, Carpender's Park, Watford, Herts.

In cases where any club has ceased to function for the duration, the books will be sent either for addition to the library when it is re-opened, or to any one serving member of the Forces who is nominated by the secretary. In order to ensure that only bona-fide requests are received, applications should be on club notepaper, or other proof of origin offered.

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Siemens Standard 16mm. Projector, Lamp equal 500 watts. Lovely condition, with new case. £56 10 0. Box No. 604, "Amateur Cine World," 324. Gray's Inn Road, London, W.C.1.

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Dallmeyer ¾" Bell & Howell 8mm. projector lens £4 10. Turner, Beverley Grange, Marford Hill, Wrexham.

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For Sale. Paillard Bolex H16 Camera as new with Leitz Hektor f/1.4, Dallmeyer Wide Angle f1/.5, Dallmeyer 2" f/2.9, extra Matched View Finder and set of filters, Carrying Case, 3' Release Cable, extra Winding Key, High Light Meter, Universal Tripod, Leitz Rangefinder, 200' Film Stock. Nearest to £95 lot, approval against cash. Box No. 607, Amateur Cine World," 324, Gray's Inn Road, London, W.C.1.

For sale—Bolex G.3 Projector, first class condition, 10 months old, little used, 2" Cooke Lens, 2/4 Black Shutter, 500 watt lamp, Still, Reverse, accessories to project 8mm., 9.5mm., 16mm. Films. Complete with Resistance, Carrying Case. First Offer. £48 10 0 secures. Box 606, "Amateur Cine World," 324, Gray's Inn Road, London, W.C.1.

Bolex Twin Turntables, fitted with Crystal Pick-ups, for sale, splendid condition, £17 10s. Schofield, 41, King Street, Huddersfield.

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50 or 70mm. lens for Pathe 200B. Good price paid. SAMBROOK, 41, Dartmouth Road, Cannock.

Advertiser would exchange Brand New Lady's or Gent's 3 speed cycle for good make 9.5 or 16mm. projector outfit and films—cash adjustment or would purchase for cash. Box No. 602, "Amateur Cine World," 324, Gray's Inn Road, London, W.C.1.

Wanted Pathescope H projector—will purchase one without lamp—also 9.5 films required. "Anglia," Upper Midway, Burton-on-Trent.

Pathescope 200-B PLUS projector urgently required—could offer brand new Lionel Electric Railway in exchange. Box No. 603, "Amateur Cine World," 324, Gray's Inn Road, London, W.C.1.

"Cinea" 16mm. Splicer wanted. Your price if new. Also, "Broadway" Style loose letters. 60, Waterloo Road, Leeds, 10.

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Wanted good 8mm. camera and projector reasonable price. Ingram, Farleigh, Uppingham, Rutland.

Amateur wants to buy Bolex G916, will pay £45. Write Williams, 6, Ealing Village, W.5.

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